Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for scheduling a ~~the~~ transmission of at least one ~~a~~ data stream in a wireless communications network having at least one access point and at least one station, the method comprising:

receiving by the at least one access point a request to send said at least one data stream for transmission from the at least one station;

granting by the at least one access point said request to send said at least one data stream;

transmitting by the at least one station a medium access control (MAC) frame comprised of a set of parameters defining the characteristics of said at least one data stream; and

calculating by the access point service and transmission times according to a schedule algorithm utilizing said parameters, wherein calculating the service and transmission times includes determining a Service Interval (SI) and a servicing time (TXOP) for said at least one data stream by: calculating a minimum interval of all Maximum Service Intervals for said at least one data stream, and calculating the SI by choosing a number that is lower than said calculated minimum interval and is a submultiple of a beacon interval.

2. (original) The method of Claim 1, wherein said schedule algorithm is operative to schedule the transmission of said at least one data stream at said calculated service and transmission times.

3. (previously presented) The method of Claim 1, further comprising generating polling frames or downlink frames at said calculated service and transmission times for transmission of said at least one data stream.

4. (original) The method of Claim 1, wherein said at least one data stream is parameterized traffic stream.

5. (previously presented) The method of Claim 1, wherein the parameters of said MAC frame include Mean Data Rate (ρ_i), Nominal MSDU Size (L_i), and Maximum Service Interval or Delay Bound (D_i).

6. (canceled)

7. (canceled)

8. (previously presented) The method of Claim 1, wherein the determining said TXOP uses additional parameters: Transmission Rate (R_i), Size of Maximum MSDU (M_i), and Overheads in Time units (O_i).

9. (canceled)

10. (canceled)

11. (previously presented) A method for scheduling the transmission of a data stream in a

wireless communications network having at least one access point (QAP) and at least one station

(WSTA), the method comprising:

determining, at said QAP, whether at least one data stream is originated from said at least

one WSTA based on a MAC frame comprised of a set of parameters defining the characteristics

of said at least data stream;

computing service and transmission times, at said QAP, for servicing said at least one

WSTA in accordance with a schedule algorithm utilizing said parameters, wherein computing

the service and transmission times includes determining a Service Interval (SI) and a servicing

time (TXOP) for said at least one data stream by calculating a minimum interval of all Maximum

Service Intervals, and calculating the SI by choosing a number that is lower than said minimum

interval and is a submultiple of a beacon interval; and

transmitting, by said at least one WSTA, said at least one data stream at said computed

service and transmission times.

12. (original) The method of Claim 11, wherein said at least one data stream is parameterized

traffic stream.

13. (previously presented) The method of Claim 11, wherein the parameters of said MAC frame

include Mean Data Rate (ρ_i), Nominal MSDU Size (L_i), and Maximum Service Interval or Delay

Bound (D_i).

14. (canceled)

15. (canceled)

16. (previously presented) The method of Claim 11, wherein the determining said TXOP uses

additional parameters: Transmission Rate (R_i), Size of Maximum MSDU (M_i), and Overheads in

Time units (O_i).

17. (canceled)

18. (currently amended) A system for seamlessly granting polls for upstream and/or sidestream

traffic while simultaneously sending downstream traffic from an access point (QAP) said (AP) to

said at least one station (WSTA), the system comprising:

a memory for storing a computer-readable code; and

a processor operatively coupled to said memory, said processor being configured to:

(1) receive by said QAP a request to send at least one data stream for transmission

from the at least one WSTA by said QAP;

(2) grant by said QAP said request to send said at least one data stream from by

said WSTA or QAP;

(3) transmit, by said at least one WSTA, a MAC frame comprised of a set of

parameters defining the characteristics of said at least one data stream; and

(4) calculate, by said QAP, service and transmission times according to a schedule

algorithm for servicing said at least one WSTA utilizing said parameters, wherein said processor

calculates the service and transmission times by determining a Service Interval (SI) and a

servicing time (TXOP) for said at least one data stream by calculating a minimum interval of all

Maximum Service Intervals for said at least one data stream, and calculating the SI by choosing a number that is lower than said calculated minimum interval and is a submultiple of a beacon interval.

19. (previously presented) The system of claim 18, wherein the parameters of said MAC frame includes: Mean Data Rate (ρ_i), Nominal MSDU Size (L_i), and Maximum Service Interval or Delay Bound (D_i).

20. (previously presented) A system for scheduling the transmission of a data stream in a wireless communications network having at least one access point (QAP) and at least one station (WSTA), the system comprising:

means for determining, at said QAP, whether at least one data stream is originated from said at least one WSTA based on a MAC frame comprised of a set of parameters defining the characteristics of said at least one data stream;

means for calculating service and transmission times, at said QAP, for servicing said at least one WSTA in accordance with a schedule algorithm utilizing said parameters, wherein the means for calculating the service and transmission times further comprises means for determining a Service Interval (SI) and a servicing time (TXOP) for said at least one data stream by calculating a minimum interval of all Maximum Service Intervals for said at least one data stream, and calculating the SI by choosing a number that is lower than said calculated minimum interval and is a submultiple of a beacon interval; and

means for transmitting, by said at least one WSTA, said at least one data stream at said computed service and transmission times.

21. (previously presented) The system of claim 20, wherein the parameters of said MAC frame include Mean Data Rate (ρ_i), Nominal MSDU Size (L_i), and Maximum Service Interval or Delay Bound (D_i).

22. (canceled)

23. (canceled)

24. (previously presented) The system of Claim 20, wherein the means for determining uses additional parameters: Transmission Rate (R_i), Size of Maximum MSDU (M_i), and Overheads in Time units (O_i).

25. (canceled)

26. (canceled)